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Fax**To:** Examiner Justin I. Michalski**From:** Thomas A. Jurecko**Fax:**
(571) 273-8300**Pages:** 8 + cover**Phone:** (571) 272-7523**Date:** November 26, 2007**Group Art Unit:** 2615**Re:** Application No. 09/833,183

See the attached Reply Brief to Examiner's Answer with Claims Appendix. The previously filed Reply Brief was missing the Appendix.

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571) 273-8300 on November 26, 2007.

Teresa L. Tomanyko

[Signature]

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Attorney Docket No. 705570US1

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Serial No. 09/833,183
Filing Date: April 11, 2001
Appellant: Hinkle et al.
Group Art Unit: 2615
Examiner: Xu Mei
Title: RADIO DISTORTION PROCESSING

REPLY BRIEF TO EXAMINER'S ANSWER

Mail Stop Appeal Brief-Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This reply brief is a reply to the Examiner's answer mailed September 25, 2007, in the appeal from the decision of the Patent Examiner dated November 14, 2006, finally rejecting claims 1-13.

STATUS OF THE CLAIMS

Claims 1-13 are the claims on Appeal. Each of these claims is currently pending in the application. All pending Claims have been rejected and are the subject of this Appeal. A copy of Claims 1-13 is set forth in the Appendix hereto.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Applicants seek the Board's review of the rejection of Claims 1-13 under 35 U.S.C. § 103(a) as being unpatentable over Brewer (U.S. Patent No. 5,255,324) in view of Wassink (U.S. Publication No. 5,633,940).

ARGUMENTS

Independent Claim 1, as discussed in Applicants' Appeal Brief filed on June 5, 2007, includes both incrementally reducing a first parameter before the second parameter in the event of clipping *and* incrementally recovering an original level of a second parameter *before* incrementally recovering an original level of the first parameter. This combination of elements is not shown, taught or suggested by Brewer and Wassink either alone or in combination. The combination of Claim 1 primarily reduces noticability/perceivability of audio distortion reduction processes for listeners by initially reducing narrowband gain and then by initially recovering wideband gain. (Paragraph [0021].)

The Final Office Action of November 14, 2006 recognized that Brewer does not disclose recovering a first parameter after a second parameter is fully recovered. (Final Office Action, Page 4.) The Examiner asserted that Wassink mentions different orders of affecting parameter settings, and the combination of Brewer and Wassink is obvious. However, neither Wassink nor Brewer disclose or suggest that the claimed order would be in any way beneficial. As best understood by the Applicants, the Examiner asserts that it would have been obvious to modify the audio distortion processing system of Brewer by providing parameter recovery in reverse order.

This brief explanation falls far short of the type of **explicit analysis** that is required by the Supreme Court in KSR Int'l v. Teleflex Inc., 550 U.S. ____ (2007). Absent such an express teaching or suggestion in the references, the explicit analysis and reasoning must be supplied by the Examiner. *Id.* In other words, the Examiner is required to provide explicit reasoning as to why

one skilled in the art would be motivated to construct the claimed audio distortion processing system. Here, the Examiner merely notes that it would have been obvious to one having ordinary skill in the art at the time the invention was made in order "to provide a maximum audio output and avoid output signals distortion" and fails to provide explicit analysis and reasoning as required.

For example, Brewer is directed to a system for improving sound quality by merely reducing clipping in an audio spectrum, as is common in the art. **Brewer does not contemplate initial recovery of wideband gain.** Further, **Wassink is directed to a system increasing perceivability of volume adjustment.** (Column 1, Lines 44-47.) Wassink is not directed to *reducing* noticability of audio distortion, as is Claim 1. In other words, the Examiner appears to be suggesting that, although Wassink increases perceivability of volume adjustments, one skilled in the art would be motivated to use the Wassink system to reduce output signal distortion by combining it with Brewer. This appears to be contra the teachings of Wassink.

It is unclear as to why one of ordinary skill in the art would combine the references as proposed. It is therefore respectfully submitted that the Examiner has not made a legally sufficient showing of a motivation to combine based on actual, specific, evidence.

Since the Examiner has offered no proper support or motivation for combining the references other than an unsupported assertion that the combination would be beneficial, it is respectfully submitted that the rejection based on obviousness is clearly and unequivocally founded upon "knowledge gleaned only from applicant's disclosure." M.P.E.P. § 2145. Consequently, it is respectfully submitted that the rejection entails hindsight and is, therefore, improper.

Claim 1 is believed to be allowable for at least these reasons. Claim 8 is believed to be allowable for at least similar reasons as Claim 1. Claims 2-7 and 9-13 depend from Claims 1 and 8 and are believed to be allowable for at least this reason.

SUMMARY

The cited references, taken separately or in combination, fail to disclose or suggest every limitation in Applicants' pending Claims. Therefore, the Examiner has failed to establish a *prima facie* case of unpatentability, and the rejection of Claims 1-13 under 35 U.S.C. § 103(a) should be reversed.

Respectfully submitted,

Dated: 26 NOV 2007

By: _____

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CLAIMS APPENDIX

Listing of Claims

1. An audio distortion processing system comprising:
 - a first processing unit adapted to be in communication with an audio source wherein said first processing unit controls a plurality of parameters;
 - a plurality of inputs in communication with said first processing unit, said plurality of inputs respectively indicating values of said plurality of parameters;
 - a power amplifier in electrical communication with said first processing unit for receiving an output signal of said first processing unit, said power amplifier selectively generating a clipping signal, said power amplifier adapted to be in communication with at least one speaker;
 - a second processing unit in electrical communication with said power amplifier and said first processing unit for receiving said clipping signal from said power amplifier and sending control signals to said first processing unit; and
 - a plurality of inputs in communication with said second processing unit, said plurality of inputs respectively indicating values of said plurality of parameters;wherein said control signals initiate an incremental reduction in a level of a first parameter of said plurality of parameters until one of either said clipping signal recedes or a reduction limit of said first parameter is achieved and then incremental reduction in a level of a second parameter of said plurality of parameters if a reduction limit of said first parameter is achieved and said clipping signal persists; and
- an incremental recovery of an original level of said second parameter if said clipping signal is not detected and then an incremental recovery of an original level

of said first parameter ensures if said original level of said second parameter is fully recovered and said clipping signal is not detected.

2. The audio distortion processing system of claim 1, wherein said reduction limit of said first parameter is a function of a first input of said plurality of inputs.

3. The audio distortion processing system of claim 1, wherein said reduction limit of said first parameter is equal to one half of said original level of said first parameter.

4. The audio distortion processing system of claim 1, wherein said reduction limit of said second parameter is a function of said reduction limit of said first parameter.

5. The audio distortion processing system of claim 1, wherein a reduction limit of said second parameter is equal to the difference between a maximum reduction value of said second parameter and said reduction limit of said first parameter.

6. The audio distortion processing system of claim 1, wherein said first parameter is bass and a corresponding first input of the plurality of inputs is operator selectable bass boost.

7. The audio distortion processing system of claim 1, wherein said second parameter is volume and a corresponding second input of the plurality of inputs is operator selectable volume level.

8. A method for controlling distortion in an audio system having first and second parameters wherein each of said parameters is a function of an operator input, and method comprising the steps of:

determining a reduction limit of said first parameter;

determining a reduction limit of said second parameter;

detecting a clipping signal in said audio system;

incrementally reducing a level of said first parameter until one of either said clipping signal recedes or said reduction limit of said first parameter is achieved;

incrementally reducing a level of said second parameter if said reduction limit of said first parameter is achieved and said clipping signal persists; and

incrementally recovering an original level of said second parameter if said clipping signal is not detected and then incrementally recovering an original level of said first parameter if said original level of said second parameter is fully recovered and said clipping signal is not detected.

9. The method of claim 8, wherein said first parameter is a bass parameter and said second parameter is a volume parameter.

10. The method of claim 8, wherein said reduction limit of said first parameter is a function of an operator input.

11. The method of claim 8, wherein said reduction limit of said first parameter is equal to one half of an operator selectable first parameter level.

12. The method of claim 8, wherein said reduction limit of said second parameter is a function of said reduction limit of said first parameter.

13. The method of claim 8, wherein said reduction limit of said second parameter is equal to the difference between a maximum reduction limit of said second parameter and said reduction limit of said first parameter.